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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/424,811	11/30/99	GILCHRIST	1066-99

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EXAMINER
HOFFMANN, J

ART UNIT	PAPER NUMBER
1731	6

DATE MAILED: 05/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/424,811

Applicant(s)

GILCHRIST ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilchrist 5470585 in view of Loewenstein (The Manufacturing Technology of Continuous Glass Fibres, 1983) and Tooley (Handbook of Glass Manufacture, 1954).

Gilchrist disclose the invention of fibers of dissolvable fibers - see claims 1 and 3. The secondary references are cited that it is well known to create glass products by heating raw materials at very high temperatures and then cooling the glass down before forming glass. High temperatures are used because homogenization and reduction of stones occurs much faster at higher temperatures - mostly because the glass is much more fluid, but also because higher temperatures and better kinetics usually go hand-in-hand. But glass that is too fluid to form into glass must be cooled to the appropriate viscosity for forming. See especially Loewenstein, page 32, lines 3-4 and figure IV/29 at page 103 and Tooley, page, 243, col. 1, lines 25-31; p 254, fig IX B, 23; p 256, second full paragraph; and page 283, fig IX D.1.

It would have been obvious to create the Gilchrist fibers by heating the starting materials to a temperature, so as to form the molten glass as quickly as possible and then cool it to a temperature to form the fibers - because the higher the temperature, the

faster the glass is homogenized, which means the more glass that can be made in a day's time.

As to claim 2, 'slowly' is a relative term. It would have been obvious to cool the glass at a rate slower than that achieved by pouring molten glass into liquid nitrogen, because it takes quite an effort and expense to cause glass to cool that quickly.

As to claims 3-4, it would have been obvious to perform routine experimentation to determine the optimal temperature for forming the fibers - if the temperature is too high, the glass would flow like water out of the bushing. If the temperature is too low, the glass would be too viscous to flow through the bushing. Alternatively, one can arbitrarily choose any of the temperatures at which the molten glass is at to be the "working temperature, so that it is in the 50-300 range. For example, one can arbitrarily choose the "working temperature" to be $T_g + 250$; the "working temperature" is defined broadly - if at all. It is noted that the claims do not require holding the glass at the "working temperature". One can deem that the cooling to T_g is part of the claimed "processing". Applicant's disclosed "processing" would inherently require cooling to room temperature.

Claim 5: See Gilchrist, col. 3, lines 45-46.

Claim 6: See Gilchrist, col. 3, lines 63-65.

Claim 7-8: See Gilchrist, col. 3, lines 60-62.

Claims 9-20 are clearly met. Claim 10 see claim 7 of Gilchrist.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The other Gilchrist patents are cited as being of general interest.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday, Tuesday, Wednesday, Thursday, Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

John Hoffmann
Primary Examiner
Art Unit 1731

jmh
May 24, 2001



5-24-01